A REVIEW: PROTOPLAST ISOLATION USING DIFFERENT CELLULASE CONCENTRATION

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Partial Fulfilment of the Requirements for the
Degree of Bachelor of Science (Hons.) Plantation Technology and Management
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DECLARATION

This Final Year Project is a partial fulfilment of the requirements for a degree of Bachelor of Science (Hons.) Plantation Technology and Management, Faculty of Plantation and Agrotechnology, Universiti Teknologi MARA.

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I hereby declare that I have checked this project and in my opinion, this project is adequate in terms of scope and quality for the award of the degree of Bachelor of Science (Hons.) Plantation Technology and Management, Faculty of Plantation and Agrotechnology, Universiti Teknologi MARA.

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Date: 22 JULY 2016

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TABLE OF CONTENTS

ABSTRACT

A REVIEW: PROTOPLAST ISOLATION USING DIFFERENT CELLULASE CONCENTRATION

One of the way to produce new plant is by using tissue culture technique. In tissue culture, protoplast isolation is the first step that should be done. There are two ways to isolate protoplast which are mechanical method and enzymatic method. However, this paper will study about protoplast isolation by using enzymatic method. Protoplast isolation have started during the early 1960 until now. With the development in technology and time, scientist have learn more about protoplast isolation technique but there is always room for improvement. There are various factors that can affect the yields and viability of the protoplast which are type of explants, isolation method and cellulase concentration. In this review paper, the focus will be on the effect of different enzyme concentration towards protoplast yield and viability especially in crops like oil palm, paddy and pineapple. It is clear that different explant require different cellulase concentration in order to give high yield and viability of protoplast. Further study should be done to identify which cellulase concentration are most suitable for each explant use.